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AMSAT NEWS SERVICE
ANS-241

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

In this edition:

* It's Time to Register for the 2010 AMSAT Symposium
* Exciting Papers and Presentations Rolling In
* Symposium Poster Presentation & Demonstration Opportunity
* David Taylor W8AAS Appointed AMSAT US Delegate to ARISS-International
* AMSAT at Shelby, NC Hamfest Labor Day Weekend
* AMSAT Invited for Public Outreach at National Air & Space Museum
* New AO-51 Schedule As Satellite Enters Full Sun
* Satellite Shorts From All Over
* European Student Competition 'In The Can'

SB SAT @ AMSAT $ANS-241.01
It's Time to Register for the 2010 AMSAT Symposium

AMSAT News Service Bulletin 241.01
>From AMSAT HQ SILVER SPRING, MD.
August 29, 2010
To All RADIO AMATEURS
BID: $ANS-241.01

It is time to register for the 2010 AMSAT Space Symposium and General meeting. You can register on-line at the AMSAT Store:
http://www.amsat-na.com/store/SymposiumReg.php

Your conference fee includes entrance to the Symposium, refreshments and a copy of the 2010 Symposium Proceedings:
   $40.00 per person before 15 September 2010
   $45.00 from 21 September through 5 October
   Online registration closes 5 October at Midnight.
   Registration at the door will be $50.00.

The Saturday Night Banquet is the highlight of the Space Symposium. Join us for great food, major announcements and the traditional banquet prize awards. Saturday Evening Banquet $45.00 per person.

The keynote speaker at the banquet will be Dr. Albert Stebbins, a theoretical astrophysicist working with the Sloan Digital Sky Survey in the Fermilab Theoretical Astrophysics Group.

AMSAT Area Coordinators typically gather to exchange ideas and techniques for supporting AMSAT members and promoting amateur satellite operations. Sunday Morning Area Coordinator's Breakfast:
$15.00 per person

Symposium Hotel Information:

The Chicago/Elk Grove Holiday Inn is located west of O'Hare Airport at
1000 Busse Road, Elk Grove Village, IL 60007. Telephone 1-847-437-6010.
The registration code for the discount rate of $79.00 per night is AMS.
The direct link to the www.holidayinn.com hotel web page is:
http://tinyurl.com/2aptoeu
You can also reach this page from the Symposium web page at:
http://www.amsat.org/amsat-new/symposium/2010/Hotel.php

Flight & Airport Information:

Chicago-O'Hare International Airport is the closest to the Chicago/
Elk Grove Holiday Inn Hotel. The hotel offers free hourly shuttle
service to and from O'Hare Airport. Call the hotel upon arrival to
let them know to come pick you up.

Note that Chicago-Midway Airport is approximately 40 miles from the
hotel and will require commuting or a $22.00 Shuttle fee. O'Hare
Airport is served by all major air carriers.

Getting there by car:
The hotel address is 1000 Busse Road, Elk Grove Village, IL 60007.
A map link is included on the hotel web page.
The GPS coordinates are 42° 00' 37.30" N 87° 57' 36.5" W.

Sunday Afternoon Tour

At the conclusion of the Symposium activities you are invited to
participate in a tour of the Tevatron at the Fermi National
Accelerator Laboratory on Sunday. Part of the tour will include
a tour of the multi-megawatt RF portions of the particle
accelerator as well as a tour of the new Super Conducting RF
Test Facility. The Symposium registration form includes a place
to indicate whether you can help with the car pools for travel to
FermiLab and back to the hotel. The planned start time for the
FermiLab tour will be 12 Noon.

[ANS thanks the 2010 Symposium Committee for the above information]

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SB SAT @ AMSAT $ANS-241.02
Exciting Papers and Presentations Rolling In

AMSAT News Service Bulletin 241.02
>From AMSAT HQ SILVER SPRING, MD.
August 29, 2010
To All RADIO AMATEURS
BID: $ANS-241.02

As of this week the 2010 Symposium Committee has had several exciting
offers for papers and presentations. Topics that have arrived include
the list below.

Exploration and definition of AMSAT's opportunities to grow our
outreach in the educational areas:
+ ARISS and Education
+ ARISS Operation Update
+ Education Paradigm Shift for AMSAT to Support Subsidized
  Launch Opportunities
+ University of Louisiana Satellite Program

Get up-to-date on AMSAT's next platform in space:
+ Assembling ARISSat
+ ARISSatTLM, a telemetry display program for ARISSat-1
+ Software Radio Technology on ARISSat-1
+ ARISSat-1 Overview
+ ARISSat-1 Power System
+ BPSK-1000 format for ARISSat-1

Discussion of AMSAT's future satellite technology:
+ Elmersat -- A Modest Proposal for Future Satellites
+ Using ham radio satellites to distribute amateur radio news in both voice and data formats
+ Characteristics of simulated data multicasts transmitted over K3IO's proposed GEO-Eagle communications platform
+ Proposal for Digital Television Aboard the ISS

Updates and information of current AMSAT topics:
+ ITAR Legal Update
+ AMSAT-FOX
+ SUNY-AMSAT System Development
+ AO-51 Battery Capacity and Spin Trends
+ South Africa AMSAT Update
+ AMSAT Publications - Future Direction for the Journal, News Service, & Web

Building up your satellite station:
+ Flex Radio V/U Module - 2m/70cm full duplex transverter module for the Flex 5000
+ Low Cost, Lightweight Homebrew Dish Construction

Teaching others how we do it:
+ How to Work the FM Ham Satellites With Your Handheld Radio
+ Successful Hamfest Demonstrations

Authors are reminded to send in your completed papers as soon as possible. Presentations should be in Powerpoint format. Bring your presentation loaded on a thumb drive which can be loaded into the projection system prior to your speaking time slot.

[ANS thanks the 2010 Symposium Committee for the above information]

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SB SAT @ AMSAT $ANS-241.03
Symposium Poster Presentation & Demonstration Opportunity

AMSAT News Service Bulletin 241.03
>From AMSAT HQ SILVER SPRING, MD.
August 29, 2010
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The poster presentation and demonstration area proved to be a popular place to visit at the Baltimore Symposium. The 2010 Symposium Committee plans to duplicate this success at the Chicago Symposium.

So, if you don't have time to generate a paper or presentation please consider setting up a Poster Presentation or demonstration. We had the opportunity to view actual CubeSats, PPod launchers, ARISSat-1 proto-types.

If you plan on setting up a Poster or demonstration please contact the 2010 Symposium Proceedings Editor, JoAnne Maenpaa K9JKM via e-mail at

k9jkm@amsat.org. We'll reserve table space for you!

[ANS thanks the 2010 Symposium Committee for the above information]

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SB SAT @ AMSAT $ANS-241.04
David Taylor W8AAS Appointed AMSAT's US Delegate to ARISS-International

AMSAT News Service Bulletin 241.04
>From AMSAT HQ SILVER SPRING, MD.
August 29, 2010
To All RADIO AMATEURS
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AMSAT President Barry Baines, WD4ASW has appointed David Taylor, W8AAS of Columbia, MD as AMSAT's US delegate to ARISS-International (ARISS-I). Dave replaces Barry Baines, WD4ASW who was holding the position temporarily following the resignation of Will Marchant, WC6ROL in 2009. ARISS is 'Amateur Radio on the International Space Station'.

Barry noted, "I am pleased to appoint Dave, W8AAS as our new ARISS-International delegate. Dave has extensive experience with the ARISS program, having participated as a trainer and procedure writer, ground station operator, school contact mentor and operations coordinator. His extensive knowledge of day-to-day operations of ARISS coupled with his exposure to the workings of ARISS-I as an observer as well as supporting the efforts of past AMSAT human spaceflight activities makes him well qualified to serve as AMSAT's representative and advocate for amateur radio in space."

Dave was first licensed in 1970 and has been involved with SAREX/ARISS since 2000. He holds an Extra Class amateur radio license.

ARISS-I is a working group consisting of a consortium of national amateur radio organizations and AMSAT organizations of the host countries represented on the International Space Station. ARISS-I serves as the 'unified voice of amateur radio' in working with the space agencies that manage the ISS. Since ARISS is international in scope, the team coordinates locally with their respective space agency (e.g. ESA, NASA, JAXA, CSA, and the Russian Space Agency) and as an international team through ARISS working group meetings, teleconferences and through electronic mail.

In North America, the US delegates are Rosalie White, K1STO (appointed by the ARRL) and David Taylor, W8AAS (appointed by AMSAT). The Canadian delegates are Daniel Lamoureux, VE2KA (appointed by Radio Amateurs of Canada) and Maurice-Andr[illegible] Vigneault, VE3VIG (appointed by AMSAT). In addition there are four European delegates, two Japanese delegates, and two Russian delegates. The Chairman of ARRIS-I is Gaston Bertels, ON4WF.

Information on the activities of ARISS can be found at:
http://www.rac.ca/ariss/oindex.htm

[ANS thanks AMSAT President Barry Baines, WD4ASW and ARISS-International for the above information]

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SB SAT @ AMSAT $ANS-241.05

AMSAT at Shelby, NC Hamfest Labor Day Weekend

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AMSAT Area Coordinator Bob Felt, KB5YZG of Hendersonville, NC and AMSAT President Barry Baines, WD4ASW of Westborough, MA will be representing AMSAT at the Shelby Hamfest on Saturday and Sunday, September 4-5. The Hamfest is at the Dallas, NC Park (1303 Dallas-Cherryville Highway, Dallas, NC 28034) adjacent to Gastonia College. Hamfest details may be found at http://www.shelbyhamfest.com.

Along with the traditional AMSAT booth, there is an AMSAT Forum scheduled for 0920-1020 on Saturday morning in Room B of the main commercial building. AMSAT President Barry Baines, WD4ASW will provide an update on AMSAT activities, including an overview of ARISSat-1. Bob and Barry also hope to do some satellite contacts from the hamfest as well.

AMSAT members who are attending the Shelby Hamfest are encouraged to stop by the AMSAT booth, which is expected to be positioned in the main commercial building. Any AMSAT member interested in helping to man the AMSAT booth are encouraged to contact Bob Felt, KB5YZG (kb5yzg@amsat.org). Shelby is always a busy weekend and additional volunteers are always welcome.

[ANS thanks AMSAT President Barry Baines, WD4ASW for the above information]

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SB SAT @ AMSAT $ANS-241.06
AMSAT Invited for Public Outreach at National Air & Space Museum

AMSAT News Service Bulletin 241.06
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Samudra Haque, N3RDX noted an opportunity to volunteer for an AMSAT outreach activities, being organized by the National Air and Space Museum in Washington, DC. Details include:

Event: Hispanic Heritage Month Family day - Argentina in Air and Space
Location: National Air and Space Museum, Washington, DC
>Date: Saturday, October 16, 2010
Time: 10 AM - 3 PM

Samudra is volunteering to organize AMSAT's participation for the event.

Please contact him through e-mail (n3rdx@amsat.org) if you are interested and able to participate in any form.

NASM is looking for AMSAT members who would be interested in talking to the visitors about satellites. Because the focus of the day is Argentina, we are particularly interested in people with expertise in Argentinean satellites. Bonus points for members how can discuss Pehuensat-1 because Pablo de Leon, who was the payload manager, will be a featured speaker at the event.

AMSAT members would set-up tables with equipment, posters, and other items of interest to visitors. These tables would be staffed throughout the day by AMSAT members. You are welcome to volunteer for a couple of hours or the whole day. Free parking will be provided all, and lunch will be provided for people who volunteer the whole day.

Samudra will need to know:
+ Can you volunteer any exhibition/display resources (pictures, posters, etc.) ?
+ Can you volunteer your time on October 16, 2010 for any portion?
+ Can you provide any presentation materials relevant to Argentina in Air and Space?
+ Will you require transportation? etc. etc.

[ANS thanks Samudra Haque, N3RDX for the above information]

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SB SAT @ AMSAT $ANS-241.07
New AO-51 Schedule As Satellite Enters Full Sun

AMSAT News Service Bulletin 241.07
>From AMSAT HQ SILVER SPRING, MD.
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To All RADIO AMATEURS
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AO-51 Command Team, Mark Hammond, N8MH said this week that according to projections, the next 100% illumination period for AO-51 has begun. Hopefully for the next week or two AO-51 can run both transmitters ON at reasonable power. The PL tone isn't needed (and hasn't been for the last few weeks).

FM Digital PBBS, U
Uplink: N/A
Downlink: 435.150 Mhz FM

FM Repeater, V/U
Uplink: 145.920 Mhz FM
Downlink: 435.300 Mhz FM

Even though AO-51 "sees sunlight" all the time, it doesn't "see" the sun equally throughout an orbit. So, the Operations Team is going to keep the power management software running in hopes they can optimize the transmitter power output and keep the battery temperatures down.

The way it is currently configured, AO-51 can run in one of three states, depending on available battery power:
1) HIGH 435.300 at 550 mW and 435.150 at 420 mW
2) MEDIUM 435.300 at 420 mW and 435.150 at 300 mW
3) LOW which currently sets both transmitters effectively to OFF

It is very likely that users will see the transmitter power going up and down some as the battery voltage goes up and down. AO-51 Operator hope the power changes do not occur too often, and adjustments will be made after collecting some telemetry over the next few days. The goal has always been to keep it ON and useable as much as possible, and the Command Team will do their best to continue that tradition.

Activity reports over the next few weeks to http://oscar.dcarr.org/ (or to n8mh AT amsat.org if AO-51 appears to be OFF) will be very much appreciated.

And finally--telemetry files (KISS format preferred) from around the
world will be greatly appreciated for the next few weeks!

[ANS thanks Mark Hammond, N8MH for the above information]

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SB SAT @ AMSAT $ANS-241.08
Satellite Shorts From All Over

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+ SA AMSAT has introduced SAT Network, a regular discussion on
  satellites. The first SAT Network will discuss the payload opt-
  ions for the proposed SA AMSAT payload. It will be on the air
  on Sunday 29 August 2010 at 19:30. Marten, ZS6ZY, will relay on
  3718 kHz and Chris, ZS6FCS, will take care of Echolink and the
  Webcast. (SA-Amsat http://www.amsatsa.org.za/)

+ A video showing reception of the first signals by the SUPSI team
  from the Amateur Radio CubeSat TI-SAT HB9DE, launched July 12, is
  available on YouTube. See: http://tinyurl.com/22keqkz

+ Monitor the Copenhagen Suborbitals webpage for the countdown of an
  amateur built rocket launch on August 30. See:
  http://www.copenhagensuborbitals.com/index.php

+ Two videos on YouTube video show the concept for a CubeSat propulsion
  system using plasma electrolysis of water. This prototype shows that
  thrust can be produced by plasma electrolysis - it burns water, so to
  speak. See: http://tinyurl.com/2csky34

+ The wakeup song has been a part of the space program since the days
  of the Apollo missions, and now NASA is giving you two chances to be
  a part of this history! We need your help selecting wakeup songs to
  be played during the final missions of the Space Shuttle Program.
  See: https://songcontest.nasa.gov/home.aspx

+ Fabiano CT7ABD/PY5RX, celebrated his August 25 birthday by having
  the crew aboard the International Space Station sing Happy Birthday
  directly from space. Listen Audio by CT1EAT:
  http://www.issfanclub.com/node/28329

+ Echolink for Android - the suppliers of Echolink have developed an
  app for the Android phone system and it is live as of now.
  Details at: http://www.echolink.org/faq_android.htm

+ This time lapse footage of views of sunrise and sunset was taken by
  astronaut Don Pettit. See: http://tinyurl.com/39c7ylh

+ A group of 4 operators will be operating as AO1EME from IN70qk on
  2-5 September. The main goal will be EME on 144 MHz, but they'll
  also have a 70cm. 20 el. cross yagi and plan to operate on the
  satellites when there is no Moon and time permits. For more
information,
  operation status, on-line logs, etc please visit:
  http://www.vhfdx.info/burguillo.html (Gabriel, EA6VQ)

+ The next "Hudson Valley Satcom" net date is Thursday Sept. 2 at 8PM
(EDT, or 2400 UTC), on the improved "146.97" MBARC Repeater. (Pl. 100;
down 600); with an echolink node of: N2EYH-L More info:
http:www.hvsatcom.org/ (Stu WA2BSS)

+ ESA astronaut Paolo Nespoli, IZ0JPA has been scheduled for an ARISS refresher course on September 3, during which he will be briefed on procedures to install the VHF Ericsson amateur radio system in the Columbus module. Nespoli is slated to fly with Expedition 26 in November 2010.

+ Clint Bradford, K6LCS and Gordon West WB6NOA ran a very successful amateur satellite operations demonstration at the Orange County Fair earlier this month. This has been written up in the ARRL Southwestern Division's newsletter available on-line at: http://web.me.com/clintbradford/k6lcs/Docs_files/OCFAIR-2010.pdf Clint reports that CQ Magazine has also accepted their article proposal. Watch for it in an upcoming issue!

+ MMSSTV is an easy to use SSTV program for your PC which will allow you to receive and decode the SSTV signals from the ISS. Makoto Mori, JE3HHT has released version 1.12. MMSSTV can be downloaded from http://mmhamsoft.amateur-radio.ca/pages/mmsstv.php

[ANS thanks everyone for the above information]

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SB SAT @ AMSAT $ANS-241.09
European Student Competition 'In The Can'

AMSAT News Service Bulletin 241.09
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A story appearing at SpaceMart.com section of SpaceDaily.com (http://tinyurl.com/32lxyjo) on August 27 described the success of the first ESA CanSat competition.

High school students from different ESA Member States were able to watch their own 'satellites' soar into the sky aboard suborbital rockets during the first European CanSat competition, held at the Andoya Rocket Range in Norway.

The CanSat competition, organised by ESA's Education Office and the Norwegian Centre for Space-related Education (NAROM), was open to teams of at least four students, assisted by a teacher or tutor.

The selected teams had to build their own small CanSat 'satellite' in six months, with each team developing an experiment that would fit inside a 350 ml soft drink can. These investigations ranged from calculating variations in Earth's magnetic field and tracking the Sun, to measuring solar radiation and levels of carbon dioxide.

The most exciting day was 17 August, when the students were able to watch five Intruder rockets launch their CanSats from Skarsteindalen, a former military facility close to Andoya Rocket Range. The mini-payloads soared to an altitude of 1 km before parachuting back to Earth.

The culmination of the competition was the prize ceremony on 18 August, when the expert jury announced the results of its evaluation of the pro-

jects and selected the three winning teams:
+ The bronze award went to the Brussels Vikings team from Sint-
  Pieterscollege Jette in Belgium.
+ The silver award went to the Irish team Triailliu from Laurel Hill
  School.
+ The gold award winners were 'Team Eclipse' from St Paul's School in
  London, United Kingdom.

A CanSat is a simulation of a real satellite, integrated within the volume and shape of a regular soft drink can. CanSats offer unique opportunities for students to experience their first real space-related project. The participating countries in the first competition were Belgium, Czech Republic, Denmark, Greece, Italy, Ireland, Norway, Spain, Sweden and United Kingdom.

The European CanSat competition is one of many ESA hands-on initiatives to inspire young people to follow a career in science or engineering. In this way, it is hoped to ensure the availability of a highly qualified
work force in the space industry of the future.

One of the primary objectives of the competition is to promote the CanSat
concept in ESA Member States. Similar competitions already exist in some

ESA Member States and ESA is seeking to support additional CanSat activ-
ities from 2011.

[ANS thanks SpaceMart.com for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office. And, with that please recall the young ham who went to work in an office. While the IT department is setting up his computer they tell him to think of a password. The fella says his password will be 'mickey goofy minnie pluto donald and Washington'. The IT guy asks why in the world did he pick that password? He replied, "You told me it had to be five chara-
cters with a capitol!"

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM